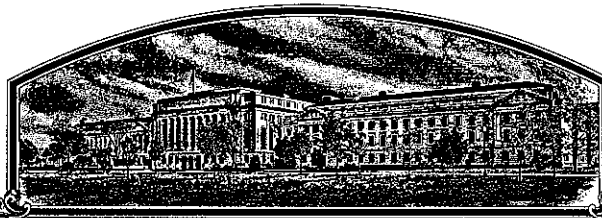


No.

8200166



THE UNITED STATES OF AMERICA

TO ALL TO WHOM THESE PRESENTS SHALL COME:

C. Harvey Campbell, Jr.

Whereas, THERE HAS BEEN PRESENTED TO THE

Secretary of Agriculture

AN APPLICATION REQUESTING A CERTIFICATE OF PROTECTION FOR AN ALLEGED NOVEL VARIETY OF SEXUALLY REPRODUCED PLANT, THE NAME AND DESCRIPTION OF WHICH ARE CONTAINED IN THE APPLICATION AND EXHIBITS, A COPY OF WHICH IS HEREUNTO ANNEXED AND MADE A PART HEREOF, AND THE VARIOUS REQUIREMENTS OF LAW IN SUCH CASES MADE AND PROVIDED HAVE BEEN COMPLIED WITH, AND THE TITLE THERETO IS, FROM THE RECORDS OF THE PLANT VARIETY PROTECTION OFFICE, IN THE APPLICANT(S) INDICATED IN THE SAID COPY, AND WHEREAS, UPON DUE EXAMINATION MADE, THE SAID APPLICANT(S) IS (ARE) ADJUDGED TO BE ENTITLED TO A CERTIFICATE OF PLANT VARIETY PROTECTION UNDER THE LAW.

NOW, THEREFORE, THIS CERTIFICATE OF PLANT VARIETY PROTECTION IS TO GRANT UNTO THE SAID APPLICANT(S) AND THE SUCCESSORS, HEIRS OR ASSIGNS OF THE SAID APPLICANT(S) FOR THE TERM OF *eighteen* YEARS FROM THE DATE OF THIS GRANT, SUBJECT TO THE PAYMENT OF THE REQUIRED FEES AND PERIODIC REPLENISHMENT OF VIABLE BASIC SEED OF THE VARIETY IN A PUBLIC REPOSITORY AS PROVIDED BY LAW, THE RIGHT TO EXCLUDE OTHERS FROM SELLING THE VARIETY, OR OFFERING IT FOR SALE, OR REPRODUCING IT, IMPORTING IT, OR EXPORTING IT, OR USING IT IN PRODUCING A HYBRID OR DIFFERENT VARIETY THEREFROM, TO THE EXTENT PROVIDED BY THE PLANT VARIETY PROTECTION ACT. UNITED STATES SEED OF THIS VARIETY (1) SHALL BE SOLD BY VARIETY NAME ONLY AS OFFICIAL CERTIFIED SEED AND (2) SHALL CONFORM TO THE NUMBER OF GENERATIONS SPECIFIED BY THE OWNER OF THE RIGHTS. (84 STAT. 1542, AS AMENDED, 7 U.S.C. 2321 ET SEQ.)

COTTON

'Germain's' Acala GC-510'

In Testimony Whereof, I have hereunto set my hand and caused the seal of the Plant Variety Protection Office to be affixed at the City of Washington this 24th day of March in the year of our Lord one thousand nine hundred and eighty-three.

John R. Block

Secretary of Agriculture

Attest:

Kenneth H. ...
Acting
Commissioner
Plant Variety Protection Office
Grain Division
Agricultural Marketing Service



UNITED STATES DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION

FORM APPROVED
OMB NO. 40-R3822

APPLICATION FOR PLANT VARIETY PROTECTION CERTIFICATE

INSTRUCTIONS: See Reverse.

No certificate for plant variety protection may be issued unless a completed application form has been received (5 U.S.C. 553).

FOR OFFICIAL USE ONLY

1a. TEMPORARY DESIGNATION OF VARIETY GC-510-2	1b. VARIETY NAME GERMAIN'S Acala GC-510 To be determined	PV NUMBER 8200166	
2. KIND NAME Cotton	3. GENUS AND SPECIES NAME GOSSYPIMUM HIRSUTUM	FILING DATE 8/26/82	TIME 3:00 P.M.
4. FAMILY NAME (BOTANICAL) MALVACIEAE	5. DATE OF DETERMINATION November 1, 1979	FEE RECEIVED \$ 500.00 \$ 250.00	DATE 8/26/82 2/8/83
6. NAME OF APPLICANT(S) HC & A, Inc. C. HARVEY Campbell, Jr.	7. ADDRESS (Street and No. or R.F.D. No., City, State, and ZIP Code) P.O. Box 9656 Bakersfield, CA 93389	8. TELEPHONE AREA CODE AND NUMBER (805)833-1751	
9. IF THE NAMED APPLICANT IS NOT A PERSON, FORM OF ORGANIZATION: (Corporation, partnership, association, etc.) Corporation	10. IF INCORPORATED, GIVE STATE AND DATE OF INCORPORATION California 3-12-80	11. DATE OF INCORPORATION 3-12-80	
12. NAME AND MAILING ADDRESS OF APPLICANT REPRESENTATIVE(S), IF ANY, TO SERVE IN THIS APPLICATION AND RECEIVE ALL PAPERS: HC & A, Inc., P.O. Box 9656, Bakersfield, CA 93389			

13. CHECK BOX BELOW FOR EACH ATTACHMENT SUBMITTED:

- ☒ 13A. Exhibit A, Origin and Breeding History of the Variety (See Section 52 of the Plant Variety Protection Act.)
- ☒ 13B. Exhibit B, Novelty Statement.
- ☒ 13C. Exhibit C, Objective Description of the Variety (Request form from Plant Variety Protection Office.)
- ☐ 13D. Exhibit D, Additional Description of the Variety.

14a. DOES THE APPLICANT(S) SPECIFY THAT SEED OF THIS VARIETY BE SOLD BY VARIETY NAME ONLY AS A CLASS OF CERTIFIED SEED? (See Section 83(a). (If "Yes," answer 14B and 14C below.) ☒ YES ☐ NO

14b. DOES THE APPLICANT(S) SPECIFY THAT THIS VARIETY BE LIMITED AS TO NUMBER OF GENERATIONS? ☐ YES ☒ NO

14c. IF "YES," TO 14B, HOW MANY GENERATIONS OF PRODUCTION BEYOND BREEDER SEED? ☐ FOUNDATION ☐ REGISTERED ☐ CERTIFIED

15a. DID THE APPLICANT(S) FILE FOR PROTECTION OF THIS VARIETY IN OTHER COUNTRIES? ☐ YES ☒ NO (If "Yes," give name of countries and dates.)

15b. HAVE RIGHTS BEEN GRANTED THIS VARIETY IN OTHER COUNTRIES? ☐ YES ☒ NO (If "Yes," give name of countries and dates.)

16. DOES THE APPLICANT(S) AGREE TO THE PUBLICATION OF HIS/HER (THEIR) NAME(S) AND ADDRESS IN THE OFFICIAL JOURNAL? ☒ YES ☐ NO

17. The applicant(s) declare(s) that a viable sample of basic seed of this variety will be furnished with the application and will be replenished upon request in accordance with such regulations as may be applicable.

The undersigned applicant(s) is (are) the owner(s) of this sexually reproduced novel plant variety, and believe(s) that the variety is distinct, uniform, and stable as required in Section 41, and is entitled to protection under the provisions of Section 42 of the Plant Variety Act.

Applicant(s) is (are) informed that false representation herein can jeopardize protection and result in penalties.

August 23, 1982

(DATE)

C. Harvey Campbell Jr.
(SIGNATURE OF APPLICANT)

(SIGNATURE OF APPLICANT)

ITEM 13a:

BREEDING HISTORY OF GC-510-2

GC-510-2 is a reselected line from T-8296. T-8296 is a USDA line from the U.S. Agricultural Research Station, Shafter, California. T-8296 was an F₅ selection from the cross of T-4852 and T-5292.

T-4852 = C6TE X NM B3080

T-5292 = NM 7403 X 4-42-77

GC-510-1 was reselected from the F₈ of T-8296 in 1979 for heat and verticillium tolerance. GC-510-2 was reselected in 1980 for additional heat and verticillium tolerance from GC-510-1. A breeding and selection flow sheet is as follows:

Year	Procedure
1971	T 4852 X T 5292
Winter 1971	Bulk F ₂
1972	Pedigree Single Plant F ₃
1973	" " " F ₄
1974	Selected T 8296 F ₅
1975	T 8296 Bulk F ₆
1976	T 8296 Bulk F ₇
1977	T 8296 Bulk F ₈
1978	No increase
1979	HC & A reselected as GC-510-1 F ₉
1980	HC & A reselected as GC-510-2 F ₁₀

GC-510-2 is the F₁₀ of the cross T 4852 X T 5292

The stability of GC-510-2 has been observed for four reproductive generations and the variety has maintained stability in its plant characteristics. The variant level is too low to allow meaningful percentage counts of variants, therefore no variants have been observed and the variety is stable.

The breeding objective was to breed an Acala-type cotton with verticillium tolerance and heat resistance superior to SJ-5, and yield equal to or better than SJ-5.

The procedure used for selecting for heat tolerance in Acala GC 510-2 was as follows:

Boll retention, i.e. less abscission of immature bolls, is used as a method of measuring heat tolerance and was used as our criterion for selection.

In order to measure boll retention a standard variety was examined to establish a percent of boll shed on first position bolls on the fruiting branches that had blooms during high temperature periods. This number was used as a standard against other lines under selection.

At the onset of above normal temperatures (over 100° F.) the growing point on several plants in the population was tagged. The tagging enabled the breeder to locate this node approximately 30 days after the onset of the high temperatures. This location is approximately the 8th node from the growing point.

Heat tolerant plants were selected approximately 30 days after the onset of above normal temperatures. Initial readings were taken and selection was made on or about August 15 to eliminate complexing with late insect problems. Plants retaining the highest number of bolls on the inside position of the fruiting branches were identified and saved for harvest.

Plants that retain more bolls than the standard have a higher level of heat tolerance. Boll shed is a symptom of lack of heat tolerance. Using this proven method we have selected for heat tolerance in GC 510-2.

The enclosed four research publications and related data demonstrate the adverse effects of high temperatures on boll retention during peak fruiting on Acala cottons. They are:

- 1) Weather data, U.S. Cotton Research Station, Shafter, California, published in 1972 by Dr. Gus Hyer. On page 3 note that high temperatures in July and August, and in the July-August combination are at the highly significant 1% level in causing a reduction in cotton yield.
- 2) New Mexico State University, A.E.S. Research Report 275, page 9, notes that in Acala cottons temperatures over 100° F. in August cause reduction in cotton yield.
- 3) An unpublished graph by West and Bentley, Kern County, California, A.E.S. Farm Advisors, showing that boll shed in SJ-2 cotton at Arvin, California, reaches a maximum 30 days after the onset of temperatures over 100° F. Boll shed is characterized by a double peak curve. New fruiting is associated with new growth.
- 4) U.S. weather data for 1978 and 1979 is enclosed to show that the boll shed observed by West and Bentley was caused by high temperatures.

Plant Protection Application #8200166 'GC-510-2'

GERMANN'S
1

Acala GC-510-2 was reselected in one location in 1979 from T8296 and in two locations in 1980 from GC-510-1.

9911
2/23/83

Two hundred plants from the 1979 Lost Hills nursery were selected for heat and verticillium tolerance under severe heat stress during the late July fruiting period and under moderate to severe verticillium pressure in late August.

In 1980, 300 plants were selected for heat tolerance and freedom from verticillium wilt leaf symptoms at Lost Hills. Severe heat stress occurred at peak fruiting, providing excellent selection conditions for evaluating fruit retention.

At Tulare in 1980, 2400 feet of row was rogued for foliar verticillium wilt symptoms with approximately 20% of plants eliminated.

In two years of reselection of USDA advance strain T8296 plants with less determinate growth were more frequently retained. In this strain less determinate growth is associated with greater fruit retention during heat stress at peak boll production during the last two weeks in July. As a result of selection for increased boll retention, taller plant types were increased in the population.

Under average growth conditions, GC-510-2 is approximately 1 inch taller than T8296. GC-510-2 is more variable in height since some short, high fruiting plant types were retained during the selection process. GC-510-2 is more heat tolerant and better adapted to the higher temperature growing areas of the San Joaquin Valley than T8296. Our breeders estimate that under moderate to severe verticillium wilt conditions GC-510-2 will show approximately 7% less foliar verticillium wilt symptoms than T8296.

In summary, USDA advance strain T8296 was reselected for increased heat tolerance and increased verticillium wilt tolerance for better adaptation in Kings, Kern and Tulare counties located in the southern San Joaquin Valley of California.

No difference in fiber quality or spinning characteristics have been noted during the reselection process.

C. Harvey Campbell, jr.
12-6-82



8811 2/23/83

GERMAIN'S

Cotton Application: Acala Cotton ~~GC-510-2~~ No. 8200166

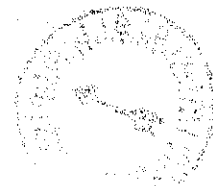
GC-510-2 is a variety reselected from USDA Shafter Advance Strain T8296.

The reselection procedure was as follows:

1979: T 8296 was planted in the Lost Hills nursery in plots 2 rows X 400 ft X 3 replications. Two hundred plants were selected for uniformity to type, heavy fruiting characteristics, and freedom from foliar verticillium wilt symptoms. High temperatures during the fruiting period enabled selection for boll retention. Verticillium wilt was moderate to severe. The seed from the 200 plants was bulked and designated as GC-510-1.

1980: GC-510-1 was planted in 2400 feet of replicated rows at Tulare, and 4800 ft of row at the Lost Hills nursery. At Tulare the nursery was rogued to eliminate plants showing foliar verticillium wilt and other off-type characteristics. At Lost Hills 1200 feet of row was rogued for off-types and foliar wilt symptoms. Three hundred heavy fruiting plants were selected from the remaining 3600 row feet. The Lost Hills seed lots were blended 50-50 and bulked with the Tulare seed lot. Lost Hills and Tulare contributed about 50% each. This bulked seed was designated GC-510-2.

C. Harvey Campbell, jr.



RM 1/1/86
Campbell

JJH 2/23/83
GERMAIN'S
ITEM 13b: NOVELTY STATEMENT *Acala GC-510-2 JJH 9/10/82*

GC-510-2 most closely resembles SJ-5 including general maturity, appearance, boll size and shape, and fiber quality.

The two major characteristics that distinguish GC-510-2 from SJ-5 are given below:

- 1) GC-510-2 is twice as tolerant to verticillium wilt as SJ-5. The 1982 data from Merced County is presented.
- 2) GC-510-2 has stronger fiber than SJ-5, based on Pressley '0' and T₁ readings. Yarn 22's carded and break factor demonstrate greater yarn strength than SJ-5.

Strength: Fiber and Yarn

	Pressley 10'		T ₁		
	1980	1981	1980	1981	1981
GC-510-2	111.5	104.02	30.8	29.00	27.3+
SJ-5	107.0	98.35	28.6	27.52	26.3+

LSD 0.05 = 1.2+
 CV % = 3.9

+California Acala Board data. All other data is from Texas Tech

Yarn Strength

	22's Carded		Break Factor	
	1980	1981	1980	1981
GC-510-2	147	134	3031	2762
SJ-5	143	129	2924	2635

Note: 1982 data will not be available until Feb/March 1983

Verticillium Wilt Tolerance Data

1982 - Merced County

Replication	Vert Symptoms per 100 plants	
	SJ-5	GC-510-2
I	65	26
II	56	35
III	30	7
IV	18	10
Aver.	42	20

U.S. DEPARTMENT OF AGRICULTURE
AGRICULTURAL MARKETING SERVICE
LIVESTOCK, POULTRY, GRAIN & SEED DIVISION
BELTSVILLE, MARYLAND 20705

EXHIBIT C
(Cotton)

OBJECTIVE DESCRIPTION OF VARIETY

COTTON (*Gossypium* spp.)

NAME OF APPLICANT(S)

HC & A, Inc.

TEMPORARY DESIGNATION

GC-510-2

VARIETY NAME

GERMAIN'S

Acala

GC-510

ADDRESS (Street and No., or R.F.D. No., City, State, and Zip Code)

P.O. Box 9656
Bakersfield, CA 93389

FOR OFFICIAL USE ONLY

PVPO NUMBER

8200166

Place numbers in the boxes (e.g.,) for the characters that best describe typical plants of this variety. The symbol Δ indicates decimal.

COMPARISON VARIETIES FOR USE BELOW

1 = Coker 310

2 = Deltapine 61

3 = Stoneville 213

4 = Paymaster 303

5 = Acala 1517-75 SJ-2

6 = Acala SJ-5

7 = Tamcot SP-37

8 = Pima S5

1 SPECIES:

☒ 1 = *G. hirsutum* L.2 = *G. barbadense* L.

2. AREA(S) OF ADAPTATION (0 = Not Tested, 1 = Not Adapted, 2 = Adapted):

☐ Eastern☐ Delta☐ Central☐ High Plains☐ El Paso Area☒ Western Low Hot Valleys☒ San Joaquin☐ Other (Specify) _____3. MATURITY (50% Open Bolls, Ideal Method: Date 50% of Crop Harvested-determined from sequential yield harvests. Give method 50% open boll)☐ ☒ 2 No. of Days earlier than ☐ ☒ 6Maturity same as ☐

Comparison Varieties

☐ No. of Days later than ☐☒ 1 = Early (Tamcot SP 37)

2 = Medium (McNair 220)

3 = Late (Stoneville 213)

4. PLANT:

☐ ☒ 3 Cm Shorter than ☐ ☒ 6Height same as ☐

Comparison Varieties

☐ Cm Taller than ☐☒ Habit: 1 = Spreading, 2 = Intermediate, 3 = Compact☒ Foliage: 1 = Sparse, 2 = Intermediate, 3 = Dense☒ Stem: 1 = Lodging, 2 = Intermediate, 3 = Erect☒ ☒ 1 2 Cm to 1st Fruiting Branch (from cotyledonary node)☐ ☒ 5 No. of Nodes to 1st Fruiting Branch☒ Stem Pubescence:

1 = Glabrous

2 = Sparse Pubescence

3 = Pubescent (Stoneville 213)

4 = Heavy Pubescence

5. LEAF:

☒ ☒ 1 1 Cm Width of Widest Leaves at Maturity☒ Type: 1 = Normal, 2 = Okra, 3 = Super Okra88/4/ 10/19/82 ☒ 2 Pubescence: 1 = Glabrous (Tamcot SP21S)

2 = Sparse Pubescence (DPL-16)

3 = Pubescent (Stoneville 213)

4 = Heavy Pubescence

☒ 3 Color: 1 = Greenish Yellow (Cascot B-2)

2 = Light Green (Stoneville 603)

3 = Dark Green (Coker 310)

4 = Other (Specify) _____

☒ 2 Nectaries: 1 = Absent

2 = Present

6. FRUITING BRANCH:

☒ 3 Type: 1 = Cluster

2 = Short

3 = Normal

☒ 1 Growth: 1 = Determinate

2 = Intermediate

3 = Indeterminate

7. GLANDS (*Gossypol*):☒ 3 Gland Density (Vegetative): 1 = Glandless

2 = Low

3 = Medium (Stoneville 213)

4 = High

☒ 2 Gossypol % (Buds): 1 = Low

2 = Medium (Stoneville 213)

3 = High

8. FLOWER:

1 Bracts: 1 = Normal 2 = Frege

2 Nectaries: 1 = Absent 2 = Present

1 Petals: 1 = Cream 2 = Yellow

1 Pollen: 1 = Cream 2 = Yellow

9. SEEDS:

1 2 0 Seed Index (g/100 seeds, fuzzy seed basis)

1 1 1 Lint Index (g of lint/100 seeds)

3 Seed Fuzz: 1 = sparse (Gregg 35) 2 = Moderate (DPL-61) 3 = Heavy (Acala SJ-1) 4 = Tufted (Pima)

10. BOLLS:

3 1 1 Lint Percent

4 0 No. Seeds Per Boll

Lint % less than

Same as

Lint % more than

Comparison Varieties

6 9 5 Grams Seed Cotton Per Boll

Grams less than

Same as

Grams more than

Comparison Varieties

2 Locules: 1 = 3-4 2 = 4-5

2 Pitting: 1 = None 2 = Fine 3 = Coarse

3 Type: 1 = Stormproof (Westburn 70) 2 = Storm Resistant (Lankart 57) 3 = Open (Deltapine 16)

4 0 Min Diameter:

1 Breadth: 1 = Broadest at Base 2 = Broadest at Middle

3 Shape: 1 = Length Less Than Width 2 = Length Equals Width 3 = Length Greater Than Width

11. BRACTEOLAS:

3 Breadth: 1 = Length Less Than Width 2 = Length Equals Width 3 = Length Greater Than Width

2 Teeth: 1 = Fine 2 = Coarse

4 No. Teeth: 1 = 3-4 2 = 5-7 3 = 8-10 4 = More Than 10

12. FIBER LENGTH:

3 6 Staple Length (32nd inches)

1 1 4 n. Span Length (2.5%)

In. Shorter Than

Length Same as

In. Longer Than

In. Span Length (50%)

Uniformity Index (50%/2.5%)

In. UHM Length

In. Shorter Than

Length Same as

In. Longer Than

In. Mean Length

Uniformity Ratio (Mean/UHM)

13. FIBER STRENGTH ELONGATION AND FINENESS:

1 0 5 1000 P.S.I. (Pressley)

8 0 Elongation (E₁)

1 4 9 Yarn Tenacity (cN/tex- 27-tex)

Yarn Strength (Lbs. 22's) combed

2 9 0 Stetometer (T₁)

4 4 0 Micronaire

14. DISEASES: (0 = not tested, 1 = susceptible, 2 = resistant)

2 Verticillium Wilt

0 Fusarium Wilt

0 Root Knot Nematode

0 Bacterial Blight (Race 1)

0 Bacterial Blight (Race 2)

0 Bacterial Blight (Other Races)

0 Ascochyta Blight

0 Phymatotrichum Root Rot

14. DISEASES (Continued): (0 = not tested, 1 = susceptible, 2 = resistant)☐ *Rhizoctonia solani*☐ Southwestern Cotton Rust☐ Anthracnose☐ *Thielaviopsis basicola*☐ *Pythium* (specify species) _____☐ Diplodia Boll Rot☐ Reniform Nematode☐ Other (specify) _____☐ *Alternaria macrospora*☐ Other (specify) _____**15. INSECTS:** (0 = not tested, 1 = susceptible, 2 = resistant)☐ Boll Weevil☐ Thrip☐ Aphid☐ Cutworm☐ Fleahopper☐ *Alabama argillacea* (Leaf Worm)☐ Fall Armyworm☐ Spider Mite☐ Grasshopper☐ *Heliothis zea* (Bollworm)☐ Lygus☐ *Heliothis virescens* (Tobacco bud worm)☐ Pink Bollworm☐ Other (specify) _____☐ Stink Bug☐ Other (specify) _____**16. GIVE VARIETY THAT MOST CLOSELY RESEMBLES THE SUBMITTED VARIETY FOR EACH OF THE FOLLOWING CHARACTERISTICS:**

(Indicate degree of resemblance (D.R.) with one of the following numbers: 1 = Submitted variety is less than, lighter, or inferior to similar variety, 2 = Same as, 3 = More than, darker, or superior, etc. Use comparison varieties or other more appropriate varieties.)

CHARACTER	SIMILAR VARIETY	D.R.	CHARACTER	SIMILAR VARIETY	D.R.
Leaf Pubescence	SJ-5	2	1000 PSI	SJ-5	3
Seed Index	SJ-5	2	Stelometer (T_1)	SJ-5	3
Lint Index			Elongation (E_1)	SJ-5	2
Yarn Tenacity	SJ-5	2	Micronaire	SJ-5	2
Verticillium Wilt Resistance	SJ-5	3	Fusarium Wilt Resistance		

17. COMMENTS: (Present information which cannot be adequately described in 1 to 16 that significantly distinguishes your variety such as comparative disease reactions, other expressions of maturity:)

GC-510-2 differs from SJ-5 in fiber and yarn strength and verticillium wilt tolerance. The data for this is in the Novelty Statement (13b), enclosed.

ASSIGNMENT OF
PLANT VARIETY PROTECTION CERTIFICATES
NOS. 8100060, 8100061, 8100062, 8200166 AND 8400129

THIS ASSIGNMENT is executed this 15th day of November, 1984 by C. HARVEY CAMPBELL, JR., DAVID L. WEST, H. P. ANDERSON III and KENNETH L. PURYEAR (sometimes hereafter collectively "CWA") and GERMAIN'S, INC., a California corporation (hereafter "Germain's");

W I T N E S S E T H:

WHEREAS, on March 24, 1983, the Secretary of the United States Department of Agriculture, pursuant to the United States Plant Variety Protection Act of December 24, 1970 (84 Stat. 1542; 7 U.S.C., §§ 2321 et seq.; hereafter the "Act"), issued to C. Harvey Campbell, Jr. Plant Variety Protection Certificate Nos. 8100060, 8100061, 8100062 and 8200166 for Germain's Acala GC-363, Germain's Acala GC-445, Germain's Acala GC-555 and Germain's Acala GC-510, respectively; and

WHEREAS, on September 28, 1984, the Secretary of the United States Department of Agriculture pursuant to the Act issued to CWA Plant Variety Protection Certificate No. 8400129 for Germain's Acala GC-362; and

WHEREAS, by letter dated September 27, 1984, C. Harvey Campbell assigned Plant Variety Protection Certificate Nos. 8100060, 8100061, 8100062 and 8200166 to CWA; and

WHEREAS, by Agreement dated October 15, 1984 between CWA and Germain's (hereinafter the "Agreement"), CWA agreed to execute and deliver to Germain's conditional assignments of their plant variety protection rights with respect to Germain's Acala GC-362, Germain's Acala GC-363, Germain's Acala GC-445, Germain's Acala GC-510 and Germain's Acala GC-555 and the plant variety protection certificates issued with respect thereto, Certificate Nos. 8400129, 8100060, 8100061, 8100062 and 8200166, respectively;

NOW, THEREFORE, in consideration of the foregoing recitals and of the mutual covenants hereinafter set forth, IT IS AGREED as follows:

1. Assignment. CWA hereby assigns to Germain's all their right, title and interest in and to their plant variety protection rights with respect to Germain's Acala GC-362, Germain's Acala GC-363, Germain's Acala GC-445, Germain's Acala GC-510 and Germain's Acala GC-555 and the plant variety protection certificates issued with respect thereto, Certificate Nos. 8400129, 8100060, 8100061, 8100062 and 8200166, respectively, on condition that, and so long as, Germain's fully performs its obligations under paragraphs 1, 2, 5, 6, 7, 11, 12 and 14 of the Agreement.

2. Grant of Security Interest. Germain's hereby grants to CWA a security interest in the plant variety protection rights with respect to Germain's Acala GC-362, Germain's Acala GC-363, Germain's Acala GC-445, Germain's Acala GC-510 and Germain's Acala GC-555 and the plant variety protection certificates issued with respect thereto, Certificate Nos. 8400129, 8100060, 8100061, 8200166 and 8100062, respectively, to secure Germain's performance of its obligations under paragraphs 1, 2, 5, 6, 7, 11, 12 and 14 of the Agreement.

3. Incorporation by Reference. The parties incorporate

Protection), 10 (Term), 11 (Sale or Assignment by Germain's) and 12 (Right of First Refusal), pertaining to plant variety protection certificates, specific reference to which should be made for further particulars.

4. Recording. Germain's may record this assignment in accordance with section 101 of the Act (7 U.S.C., § 2531).

IN WITNESS WHEREOF, the parties hereto have executed this assignment on the day and year first hereinabove written.

GERMAIN'S INC.

By Roger A. Pirie
Roger A. Pirie

"Germain's"

C. Harvey Campbell, Jr.
C. Harvey Campbell, Jr.

David L. West
David L. West

H. P. Anderson III
H. P. Anderson III

Kenneth L. Puryear
Kenneth L. Puryear

"CWA"

8200166

A S S I G N M E N T

For good and valuable consideration, receipt whereof is hereby acknowledged, the undersigned Germain's, Inc., a California corporation, of 4820 East 50th Street, Los Angeles, California 90058, does hereby sell, assign, transfer and set over to Germain's, Inc., a Delaware corporation, of 4820 East 50th Street, Los Angeles, California 90058, the entire right, title and interest in and to the plant varieties and Plant Variety Protection Certificates as set forth in Schedule 1 annexed hereto.

GERMAIN'S, INC., a California corporation

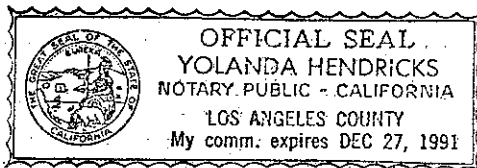
By 

Peter A. Fulgoni
President

STATE OF CALIFORNIA)
) ss.
COUNTY OF LOS ANGELES)

On this 9th day of February, in the year 1989, before me, the undersigned, a Notary Public in and for said State, personally appeared Peter A. Fulgoni, personally known to me (or proved to me on the basis of satisfactory evidence) to be the person who executed the within instrument as President on behalf of Germain's Inc., a California corporation, and acknowledged to me that the corporation executed it.

WITNESS my hand and official seal.



Yolanda Hendricks
Notary Public in and
for said State

DLY:bb 11/13/87

LRE() 2.0012.0.0

PLANT PATENTS

<u>Name and Description</u>	<u>Country</u>	<u>Number</u>	<u>Effective Date</u>	<u>Expiration Date (Year)</u>	<u>Renewal Information</u>
<u>COTTON</u>					
Acala GC-362	U.S.A.	8400129	9/28/84	2001	
Acala GC-363	U.S.A.	8100060	3/24/83	2000	
Acala GC-445	U.S.A.	8100061	3/24/83	2000	
Acala GC-510	U.S.A.	8100066 8200166	3/24/83	2000	
Acala GC-555	U.S.A.	8100062	3/24/83	2000	

WHEAT

Wheat W-444	U.S.A.	7600079	12/76	1993	
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CUYLER BURK

COUNSELLORS AT LAW

PARSIPPANY CORPORATE CENTER
FOUR CENTURY DRIVE
PARSIPPANY, NEW JERSEY 07054-4663

FACSIMILE:
(201) 734-3201

(201) 734-3200

NEW YORK OFFICE:
350 FIFTH AVENUE, SUITE 3304
NEW YORK, NEW YORK 10118

DIRECT DIAL:

May 30, 1996

FEDERAL EXPRESS

Plant Variety Protection Office
500 NAL Building
10301 Baltimore Avenue
Beltsville, Md. 20705

Attention: Anne Zempolich

Re: Assignment of Plant Variety
Protection Certificates From
Germain's, Inc. to Germain's
Cotton Seeds, Inc.

Dear Ms. Zempolich:

As we discussed this morning, I have enclosed for filing an Assignment of eight (8) plant variety protection certificates from Germain's, Inc. to Germain's Cotton Seeds, Inc. In addition, I also have enclosed a \$200.00 check payable to the United States Treasurer as payment of the applicable filing fees.

As you can see from the acknowledgement attached to the Assignment, Doug Elkins, the CEO of Germain's, Inc., executed the Assignment on behalf of Germain's, Inc. If you need to confirm that Mr. Elkins is the CEO of Germain's Inc. with someone from Germain's, Inc., the phone number for Germain's, Inc. is (209) 233-8823.

If you have any questions concerning the enclosed Assignment or its filing, please do not hesitate to call me.

Very truly yours,

J. Scott MacKay
J. Scott MacKay

JSM:mgb

cc: George Petrides (via regular mail)

CUYLER BURK ATTORNEY BUSINESS ACCOUNT FOUR CENTURY DRIVE PARSIPPANY, NJ 07054 (201) 734-3200		EXPLANATION		AMOUNT	55-150/212
PAY: Two hundred and		No		10390	
5/31/96 United States Treasurer		100		DOLLARS	CHECK AMOUNT
HUDSON UNITED BANK PASSAGE AVE. & PIER LANE FAIRFIELD, NJ 07004		TWO SIGNATURES REQUIRED IN EXCESS OF \$1,000.			
"010390" :021201503:058 2580000817"					
SECURITY FEATURES: MICRO PRINT BORDERS - COLORED BRICK PATTERN - WATERMARK ON REVERSE SIDE - MISSING FEATURE INDICATES A COPY					

SCHEDULE 1
TO
ASSIGNMENT (PVP CERTIFICATES)

Certificate No.	Date	Name of Owner	Name of Novel Variety
8100060	03/24/83	Germain's, Inc.*	GERMAIN'S ACALA GC-363
8100061	03/24/83	Germain's, Inc.*	GERMAIN'S ACALA GC-445
8100062	03/24/83	Germain's, Inc.*	GERMAIN'S ACALA GC-555
8200166	03/24/83	Germain's, Inc.*	GERMAIN'S ACALA GC-510
8400129	09/28/84	Germain's, Inc.*	GERMAIN'S ACALA GC-362
8700061	07/31/87	Germain's, Inc. **	GERMAIN'S ACALA GC-410
8800017	11/18/87	Germain's, Inc.**	GERMAIN'S ACALA GC-356
9000235	03/31/93	Germain's, Inc.	GERMAIN'S ACALA GC-702

** Assigned to Germain's, Inc. from CWA 23 February 1988

* Assigned to Germain's, Inc. from CWA 15 November 1984

ASSIGNMENT

(PVP Certificates)

This Assignment is made and entered into as of November 30, 1995, by and between Germain's, Inc., a Delaware corporation ("Assignor"), and Germain's Cotton Seeds, Inc., a New Jersey corporation ("Assignee").

WHEREAS, Assignor and Assignee have entered into that certain letter agreement, dated November 30, 1995, pursuant to which Assignor has agreed to assign certain Plant Variety Protection Certificates to Assignee upon the terms and conditions contained therein and below.

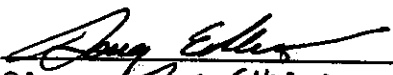
NOW, THEREFORE, in consideration of the premises and mutual promises contained herein, and for good and valuable consideration, the receipt and sufficiency of which are hereby acknowledged, the parties hereto hereby agree as follows:

1. Assignor hereby assigns, conveys and transfers to Assignee, and Assignee hereby accepts from Assignor, all of Assignor's right, title and interest in and to the Plant Variety Protection Certificates (the "Certificates") which are set forth on Schedule 1, which Schedule 1 is attached hereto and incorporated herein by this reference.

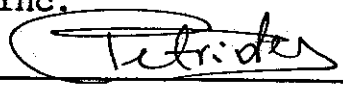
2. Assignee shall be responsible, at its own expense, for the preparation, legalization and filing of any documents and the obtaining of any third-party or governmental approvals or consents which are not required to be obtained by Assignor under the above-referenced Agreement, which may be necessary to effect and record the assignment of any of the Certificates.

IN WITNESS WHEREOF, the parties hereto have caused this Assignment to be executed as of the date first set forth above.

Germain's, Inc.

By: 
Name: Doug Elkin
Title: CEO

Germain's Cotton
Seeds, Inc.

By: 
Name: George Petrides
Title: President

By: 
Name: William Fraley
Title: Vice President

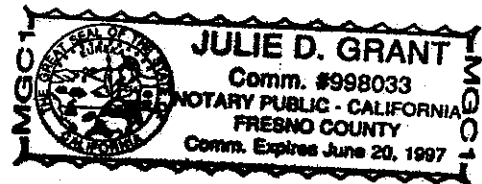
State of California)
County of Fresno) SS.

On Dec 1, 1995, before me,
Julie D. Grant Notary Public, personally appeared
Doug Ekins and _____,
personally known to me (~~or proved to me on the basis of~~
~~satisfactory evidence~~) to be the persons whose names are
subscribed to the within instrument and acknowledged to me
that ~~they~~ executed the same in their authorized capacity,
and that by their signature on the instrument the persons,
or the entity upon behalf of which the person acted,
executed the instrument.

WITNESS my hand and official seal.

Signature Julie D. Grant (seal)

Assignment DVP Cert.



State of California)
County of Fresno) SS.

On Dec. 7, 1995, before me,
Julie D. Grant, Notary Public, personally appeared
George Petrides and Bill Haley,
personally known to me (~~or proved to me on the basis of~~
~~satisfactory evidence~~) to be the persons whose names are
subscribed to the within instrument and acknowledged to me
that they executed the same in their authorized capacity,
and that by their signature on the instrument the persons,
or the entity upon behalf of which the person acted,
executed the instrument.

WITNESS my hand and official seal.

Signature Julie D. Grant (seal)

PVP Assignment

